

CLAIMS

We claim:

1. A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer hitch having a tubular sheathing member, a stationary plate fixedly attached to the sheathing member, the stationary plate having a cavity for receiving a hitch ball and a flange with a first aperture for receiving a latch pin, a lock plate pivotally connected to the stationary plate, the lock plate having a second aperture for receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the retainer bracket having a central opening in which the flange of the stationary plate is slidably disposed, the retainer bracket further having a third aperture for receiving a latch pin, a handle guide depending from the sheathing member, a handle slidably disposed in the handle guide, the handle having a latch pin capable of insertion into the first aperture of the stationary plate and the third aperture of the retainer bracket to immobilize the lock plate in a closed position in which the second aperture of the lock plate is partially misaligned with the cavity of the stationary plate such that a hitch ball is prevented from being inserted into or removed from the cavity, said locking apparatus comprising:

a lock pin having a shaft and an eyelet, said shaft being capable of insertion into the central opening of the retainer bracket; and

a lock having a hasp, said lock being positionable in a locked position in which said hasp captures said eyelet and the handle of the gooseneck trailer hitch;

wherein, when said lock is in said locked position, said shaft is not removable from the central opening of the retainer bracket and the lock plate is substantially immobilized in the closed position.

2. The locking apparatus of claim 1 wherein said shaft has a diameter of about 7/16 inch.

1 3. The locking apparatus of claim 1 wherein said shaft is substantially
2 linear and has a length of about 4 inches.

3 4. The locking apparatus of claim 1 wherein said shaft comprises a bend,
4 the retainer bracket further comprises a fourth aperture providing access into the
5 central opening of the retainer bracket, and said shaft is insertable through the
6 fourth aperture into the central opening of the retainer bracket such that said bend
7 prevents removal of said shaft from the retainer bracket when said lock is in said
8 locked position.
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1 5. A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally
5 connected to the stationary plate, the lock plate having a second aperture for
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the
7 retainer bracket having a central opening in which the flange of the stationary
8 plate is slidably disposed, the retainer bracket further having a third aperture for
9 receiving a latch pin, a handle guide depending from the sheathing member, a
10 handle slidably disposed in the handle guide, the handle having a latch pin capable
11 of insertion into the first aperture of the stationary plate and the third aperture of
12 the retainer bracket to immobilize the lock plate in a closed position in which the
13 second aperture of the lock plate is partially misaligned with the cavity of the
14 stationary plate such that a hitch ball is prevented from being inserted into or
15 removed from the cavity, a cover plate depending from the sheathing member and
16 enshrouding the handle guide, the cover plate having a first wall with a fourth
17 aperture and a second wall with a fifth aperture generally aligned with the fourth
18 aperture, said locking apparatus comprising:

19 a lock pin having a shaft and an eyelet, said shaft being capable of insertion
20 through the fourth and fifth apertures of the cover plate; and

21 a lock having a hasp, said lock being positionable in a locked position in
22 which said hasp captures said eyelet and the handle of the gooseneck trailer hitch;

23 wherein, when said lock is in said locked position, said shaft is not removable
24 from the fourth and fifth apertures of the cover plate and the lock plate is
25 substantially immobilized in the closed position.

26 6. The locking apparatus of claim 5 wherein said shaft has a diameter of
27 about 7/16 inch.



1 7. The locking apparatus of claim 5 wherein said shaft is substantially
2 linear and has a length of about 6 inches.
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8. A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer
hitch having a tubular sheathing member, a stationary plate fixedly attached to the
sheathing member, the stationary plate having a cavity for receiving a hitch ball
and a flange with a first aperture for receiving a latch pin, a lock plate pivotally
connected to the stationary plate, the lock plate having a second aperture for
receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the
retainer bracket having a central opening in which the flange of the stationary
plate is slidably disposed, the retainer bracket further having a third aperture for
receiving a latch pin, a handle guide depending from the sheathing member, a
handle slidably disposed in the handle guide, the handle having a latch pin capable
of insertion into the first aperture of the stationary plate and the third aperture of
the retainer bracket to immobilize the lock plate in a closed position in which the
second aperture of the lock plate is partially misaligned with the cavity of the
stationary plate such that a hitch ball is prevented from being inserted into or
removed from the cavity, said locking apparatus comprising:

a lock comprising a body and a hasp, said hasp being capable of insertion
into the central opening of the retainer bracket adjacent the flange of the stationary
plate such that the lock plate is substantially immobilized in the closed position.

9. The locking apparatus of claim 8 wherein said hasp is further capable
of capturing the handle of the gooseneck trailer hitch.

10. The locking apparatus of claim 8 wherein said hasp comprises a pair of
connected legs spaced apart by a width of about one inch, each of said legs having a
diameter of about 7/16 inch, said hasp and said body defining an interior space
having a length of about 1 3/4 inches when said lock is in its locked position.

11. The locking apparatus of claim 8 wherein said hasp comprises a pair of
connected legs spaced apart by a width of about 1 1/4 inches, each of said legs having

1 a diameter of about 7/16 inch, said hasp and said body defining an interior space
2 having a length of about 4 ½ inches when said lock is in its locked position.
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1 12. A method of locking a gooseneck trailer hitch, the gooseneck trailer
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally
5 connected to the stationary plate, the lock plate having a second aperture for
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the
7 retainer bracket having a central opening in which the flange of the stationary
8 plate is slidably disposed, the retainer bracket further having a third aperture for
9 receiving a latch pin, a handle guide depending from the sheathing member, a
10 handle slidably disposed in the handle guide, the handle having a latch pin capable
11 of insertion into the first aperture of the stationary plate and the third aperture of
12 the retainer bracket to immobilize the lock plate in a closed position in which the
13 second aperture of the lock plate is partially misaligned with the cavity of the
14 stationary plate such that a hitch ball is prevented from being inserted into or
15 removed from the cavity, said method comprising:

16 placing the lock plate in the closed position;

17 inserting a lock pin into the central opening of the retainer bracket, the lock
18 pin having a shaft and an eyelet, said shaft being at least partially disposed within
19 the central opening of the retainer bracket;

20 positioning the handle of the gooseneck trailer hitch in close proximity to
21 said eyelet;

22 providing a lock having a hasp;

23 passing said hasp through said eyelet and the handle of the gooseneck trailer
24 hitch; and

25 closing said hasp such that said shaft is not removable from the central
26 opening of the retainer bracket and the lock plate is substantially immobilized in
27 the closed position.

1 13. The method of claim 12 further comprising the step of forming a fourth
2 aperture in the retainer bracket, said fourth aperture providing access into the
3 central opening of the retainer bracket;

4 wherein said shaft comprises a bend; and

5 wherein said inserting step comprises inserting said shaft through said
6 fourth aperture into the central opening of the retainer bracket such that said bend
7 prevents removal of said shaft from the retainer bracket when said hasp is closed.

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FOOTNOTES

1 14. A method of locking a gooseneck trailer hitch, the gooseneck trailer
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally
5 connected to the stationary plate, the lock plate having a second aperture for
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the
7 retainer bracket having a central opening in which the flange of the stationary
8 plate is slidably disposed, the retainer bracket further having a third aperture for
9 receiving a latch pin, a handle guide depending from the sheathing member, a
10 handle slidably disposed in the handle guide, the handle having a latch pin capable
11 of insertion into the first aperture of the stationary plate and the third aperture of
12 the retainer bracket to immobilize the lock plate in a closed position in which the
13 second aperture of the lock plate is partially misaligned with the cavity of the
14 stationary plate such that a hitch ball is prevented from being inserted into or
15 removed from the cavity, and a cover plate depending from the sheathing member
16 and enshrouding the handle guide, the cover plate having a first wall and a second
17 wall, said method comprising:

18 forming a fourth aperture in the first wall of the cover plate;

19 forming a fifth aperture in the second wall of the cover plate, said fifth
20 aperture being generally aligned with said fourth aperture;

21 placing the lock plate in the closed position;

22 providing a lock pin having a shaft and an eyelet;

23 inserting said shaft through said fourth and fifth apertures;

24 positioning the handle of the gooseneck trailer hitch in close proximity to
25 said eyelet;

26 providing a lock having a hasp;

1 passing said hasp through said eyelet and the handle of the gooseneck trailer
2 hitch; and
3 closing said hasp such that said shaft is not removable from said fourth and
4 fifth apertures and the lock plate is substantially immobilized in the closed
5 position.
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1 15. A method of locking a gooseneck trailer hitch, the gooseneck trailer
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally
5 connected to the stationary plate, the lock plate having a second aperture for
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the
7 retainer bracket having a central opening in which the flange of the stationary
8 plate is slidably disposed, the retainer bracket further having a third aperture for
9 receiving a latch pin, a handle guide depending from the sheathing member, a
10 handle slidably disposed in the handle guide, the handle having a latch pin capable
11 of insertion into the first aperture of the stationary plate and the third aperture of
12 the retainer bracket to immobilize the lock plate in a closed position in which the
13 second aperture of the lock plate is partially misaligned with the cavity of the
14 stationary plate such that a hitch ball is prevented from being inserted into or
15 removed from the cavity, said method comprising:

16 placing the lock plate in the closed position;

17 providing a lock having a hasp;

18 inserting said hasp into the central opening of the retainer bracket adjacent
19 the flange of the stationary plate; and

20 closing said hasp such that the lock plate is substantially immobilized in the
21 ~~closed position~~

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